rent in the magnetizing coil. To obtain such a curve, a coil, wound on a thin rectangular bobbin which could be slipped into the air gap of the electromagnet, was connected to a ballistic galvanometer. The deflections of the galvanometer when the coil is quickly withdrawn from the air gap being proportional to f, the required curve can be obtained by using such deflections and the corresponding magnetizing currents as coordinates.

The curve obtained will depend on the magnetic history of the ring. If the curve is to be of any use, the initial condition of the iron must be one that can be reproduced. The ring may be entirely demagnetized initially or it may be in the condition in which it is left when a certain fixed magnetizing current has been passed through it. This current should be large enough to magnetize the core quite strongly.

Another curve can be plotted showing the relation between the magnetizing current and the force on the conductor, the current in the conductor and the length of the conductor being constant. If these two curves be plotted to the same axes, it will readily appear that the force is proportional to the intensity of the field.

The results which I have obtained from these curves for the ratio of the field to the force show a larger variation than do the ratios found in Tables I. and II., but with ordinary care the ratio of corresponding ordinates on the two curves will not vary more than three per cent. This seems to be about as great accuracy as may be expected with the apparatus in this present form. The larger part of the error is undoubtedly due to the uncertain variations in the magnetic field.

The apparatus as here described was designed for the use of students of general physics. Its special advantage is the directness with which the force is obtained in terms of quantities already familiar to the student.

R. A. Porter

Syracuse University,
March 5, 1907

QUOTATIONS

THE NEW ENGLAND COLLEGE

Some of the New England college presidents are practically facing the question whether they should not voluntarily limit the number of their students. Within the last ten years, Dartmouth, for example, has nearly doubled in size—an increase due largely to the success of its professional and technical departments. President Hopkins of Williams favors the idea of limitation in the smaller colleges; and there is much to be said for his view, provided that the income of the corporation is sufficient to support an efficient faculty. In colleges like Amherst, Bowdoin, and Williams a first-class education can now be had, even as at the large universities. But there comes a point in the development of a college when the increase in students entails an expenditure out of proportion to the gains by tuition fees. The number of instructors has to be multiplied, and there must be a greater outlay for lecture-rooms and laboratories. Many of the smaller colleges would be helped if the craze for mere numbers could be checked. The energies of the professors could then be concentrated on the instruction of their relatively small classes, they could insist on a higher standard of scholarship, and possibly make the B.A. mean as much as a degree in technology.—*The N. Y. Evening Post.*

NOTES ON ORGANIC CHEMISTRY

ANHYDROUS SULPHOCYANIC ACID

Although numerous salts of sulphocyanic (thiocyanic) acid, HSCN, are known, and some of them are of considerable technical importance, the free acid has, hitherto, never been obtained in a state of purity. Wöhler believed that he had prepared it and Liebig stated that it decomposed with extreme ease. In 1887 P. Klason distilled the aqueous acid and passed the vapor over calcium chloride, heated to 40°, the unabsorbed material was condensed at a low temperature and was thought to consist of the anhydrous sulphocyanic acid, but A. Rosenheim and R. Levy[1] have recently shown that although Klason's

[1] *Ber. d. chem. Ges.*, **40**, 2166 (1907).